Hydric Soils

Nobles County, Minnesota

[This report lists only those map unit components that are rated as hydric. Dashes (---) in any column indicate that the data were not included in the database. Definitions of hydric criteria codes are included at the end of the report]

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
1003B:					
Udorthents (cut and fill land), 0 to 6 percent slopes	Udorthents, (cut and fill land)	100	Moraines		---
1007:					
Udorthents, shallow (sanitary landfill)	Udorthents, shallow, sanitary landfill	100	Moraines	No	---
1015A:					
Havelock clay loam, 0 to 2 percent slopes, frequently flooded	Havelock, frequently flooded	80	Flood plains	Yes	2B3, 4
	Havelock, occasionally flooded	10	Flood plains	Yes	2B3
	Calco, frequently flooded	5	Flood plains	Yes	2B3, 4
	Spillco, frequently flooded	5	Flood plains	Yes	4
1024A:					
Havelock clay loam, 0 to 2 percent slopes, occasionally flooded	Havelock, occasionally flooded	80	Flood plains	Yes	2B3
	Havelock, frequently flooded	10	Flood plains	Yes	2B3, 4
	Spillco, occasionally flooded	5	Flood plains	No	---
	Comfrey, occasionally flooded	3	Flood plains	Yes	2B3
	Calco, occasionally flooded	2	Flood plains	Yes	2B3
GP:					
Pits, gravel-Udipsamments complex	Pits, gravel	80	Moraines, Outwash plains, Stream terraces		---
	Udipsamments	20	Moraines, Outwash plains, Stream terraces		---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L5A:					
Delft, overwash-Delft complex, 1 to 4 percent slopes	Delft, overwash	45	Moraines	No	---
	Delft	35	Moraines	Yes	2B3
	Delft, frequently flooded	7	Moraines	Yes	2B3
	Glencoe, depressional	4	Moraines	Yes	2B3, 3
	Terril	4	Moraines	No	---
	Poorly drained soils	3	Moraines	Yes	2B3
	Canisteo	2	Moraines	Yes	2B3
L6A:					
Biscay loam, 0 to 2 percent slopes	Biscay	85	Outwash plains, Stream terraces	Yes	2B3
	Biscay, depressional	8	Outwash plains, Stream terraces	Yes	2B3, 3
	Mayer	5	Outwash plains, Stream terraces	Yes	2B3
	Cylinder	2	Outwash plains, Stream terraces	No	---
L78A:					
Canisteo clay loam, 0 to 2 percent slopes	Canisteo	65	Moraines	Yes	2B3
	Crippin	10	Moraines	No	---
	Glencoe, depressional	10	Moraines	Yes	2B3, 3
	Canisteo, depressional	5	Moraines	Yes	2B3, 3
	Harps	5	Moraines	Yes	2B3
	Webster	5	Moraines	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L79B:					
Clarion loam, 2 to 5 percent slopes	Clarion	70	Moraines	No	---
	Clarion, moderately eroded	14	Moraines	No	---
	Nicollet	9	Moraines	No	---
	Ocheyedan	5	Moraines	No	---
	Webster	2	Moraines	Yes	2B3
L83A:					
Webster clay loam, 0 to 2 percent slopes	Webster	65	Moraines	Yes	2B3
	Glencoe, depressional	14	Moraines	Yes	2B3, 3
	Canisteo	8	Moraines	Yes	2B3
	Nicollet	8	Moraines	No	---
	Poorly drained soils	5	Moraines	Yes	2B3
L85A:					
Nicollet clay loam, 1 to 3 percent slopes	Nicollet	85	Flats, Moraines, Rises	No	---
	Clarion	10	Hills, Moraines	No	---
	Webster	5	Flats, Moraines, Swales	Yes	2B3
L88A:					
Lura silty clay, depressional, 0 to 1 percent slopes	Lura, depressional	85	Lake plains	Yes	2B3, 3
	Brownton	7	Lake plains	Yes	2B3
	Depressional soils that have an organic surface layer	5	Lake plains	Yes	2B3, 3
	Prinsburg	3	Lake plains	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L96B:					
Estherville-Hawick complex, 2 to 6 percent slopes	Estherville	55	Outwash plains, Stream terraces	No	---
	Hawick	35	Outwash plains, Stream terraces	No	---
	Tomall	8	Outwash plains, Stream terraces	No	---
	Biscay	2	Outwash plains, Stream terraces	Yes	2B3
L97C:					
Hawick-Estherville complex, 6 to 12 percent slopes	Hawick	60	Outwash plains, Stream terraces	No	---
	Estherville	30	Outwash plains, Stream terraces	No	---
	Tomall	10	Outwash plains, Stream terraces	No	---
L98A:					
Crippin-Nicollet complex, 1 to 3 percent slopes	Crippin	50	Moraines	No	---
	Nicollet	40	Moraines	No	---
	Canisteo	5	Moraines	Yes	2B3
	Clarion	5	Moraines	No	---
L102C2:					
Omsrud-Storden complex, 6 to 12 percent slopes, moderately eroded	Omsrud, moderately eroded	45	Moraines	No	---
	Storden, moderately eroded	24	Moraines	No	---
	Omsrud	14	Moraines	No	---
	Terril	10	Moraines	No	---
	Delft	5	Moraines	Yes	2B3
	Crooksford	2	Moraines	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L102D2:					
Omsrud-Storden complex, 12 to 18 percent slopes, moderately eroded	Omsrud, moderately eroded	45	Moraines	No	---
	Storden, moderately eroded	20	Moraines	No	---
	Omsrud	14	Moraines	No	---
	Ridgeton	9	Moraines	No	---
	Delft	6	Moraines	Yes	2B3
	Terril	6	Moraines	No	---
L107A:					
Canisteo-Glencoe, depressional, complex, 0 to 2 percent slopes	Canisteo	50	Moraines	Yes	2B3
	Glencoe, depressional	35	Moraines	Yes	2B3, 3
	Harps	10	Moraines	Yes	2B3
	Canisteo, depressional	3	Moraines	Yes	2B3, 3
	Crippin	2	Moraines	No	---
L111A:					
Nicollet silty clay loam, 1 to 3 percent slopes	Nicollet	80	Moraines	No	---
	Okabena	14	Moraines	No	---
	Clarion	4	Moraines	No	---
	Webster	2	Moraines	Yes	2B3
L112A:					
Webster silty clay loam, 0 to 2 percent slopes	Webster	80	Moraines	Yes	2B3
	Chetomba	10	Moraines	Yes	2B3
	Glencoe, depressional	6	Moraines	Yes	2B3, 3
	Canisteo	2	Moraines	Yes	2B3
	Nicollet	2	Moraines	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L126A:					
Coland silty clay loam, 0 to 2 percent slopes, occasionally flooded	Coland, occasionally flooded	80	Flood plains	Yes	2B3
	Minneopa, occasionally flooded	10	Flood plains	No	---
	Havelock, occasionally flooded	5	Flats, Flood plains	Yes	2B3
	Spillville, occasionally flooded	5	Flood plains	No	---
L127A:					
Coland silty clay loam, channeled, 0 to 2 percent slopes, frequently flooded	Coland, frequently flooded	80	Flood plains	Yes	2B3, 4
	Minneopa, occasionally flooded	10	Flood plains	No	---
	Havelock, frequently flooded	5	Flood plains	Yes	2B3, 4
	Spillville, occasionally flooded	5	Flood plains	No	---
L129B:					
Terril loam, 2 to 6 percent slopes	Terril	90	Moraines	No	---
	Clarion	5	Moraines	No	---
	Delft	5	Moraines	Yes	2B3
L130A:					
Okoboji mucky silty clay loam, depressional, 0 to 1 percent slopes	Okoboji, mucky silty clay loam, depressional	75	Lake plains, Moraines	Yes	2B3, 3
	Okoboji, silty clay loam, depressional	14	Lake plains, Moraines	Yes	2B3, 3
	Brownton	6	Depressions, Flats, Lake plains, Moraines, Rims	Yes	2B3
	Spicer	5	Depressions, Flats, Lake plains, Rims	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L133A:					
Waldorf silty clay loam, 0 to 2 percent slopes	Waldorf	80	Lake plains, Moraines	Yes	2B3
	Marna	9	Lake plains, Moraines	Yes	2B3
	Chetomba	5	Lake plains, Moraines	Yes	2B3
	Brownton	2	Lake plains	Yes	2B3
	Lura, depressional	2	Lake plains	Yes	2B3, 3
	Barbert	1	Lake plains	Yes	2B3
	Ocheda	1	Lake plains, Moraines	No	---
L134B:					
Clarion-Crooksford complex, 1 to 5 percent slopes	Clarion	56	Hills, Moraines	No	---
	Crooksford	15	Hills, Moraines	No	---
	Clarion, moderately eroded	14	Hills, Moraines	No	---
	Nicollet	5	Moraines	No	---
	Swanlake	5	Hills, Moraines	No	---
	Terril	5	Hills, Moraines	No	---
L135A:					
Okabena silty clay loam, 1 to 3 percent slopes	Okabena	85	Moraines	No	---
	Kingston	5	Moraines	No	---
	Nicollet	4	Moraines	No	---
	Chetomba	2	Moraines	Yes	2B3
	Ocheda	2	Moraines	No	---
	Waldorf	2	Moraines	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L136A:					
Crooksford silty clay loam, 1 to 3 percent slopes	Crooksford	80	Flats, Moraines, Rises	No	---
	Nicollet	8	Flats, Moraines, Rises	No	---
	Clarion	7	Hills, Moraines	No	---
	Okabena	3	Lake plains, Moraines	No	---
	Webster	2	Moraines	Yes	2B3
L137A:					
Cylinder loam, 0 to 2 percent slopes	Cylinder	90	Outwash plains, Stream terraces	No	---
	Biscay	4	Outwash plains, Stream terraces, Swales	Yes	2B3
	Wadena	4	Hills, Hills, Outwash plains, Terraces	No	---
	Linder	2	Outwash plains, Stream terraces	No	---
L138B:					
Estherville loam, 1 to 6 percent slopes	Estherville	85	Hills, Hills, Outwash plains, Terraces	No	---
	Wadena	7	Hills, Hills, Outwash plains, Terraces	No	---
	Hawick	5	Hills, Hills, Outwash plains, Stream terraces	No	---
	Cylinder	3	Outwash plains, Stream terraces	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L139A:					
Wadena loam, 0 to 2 percent slopes	Wadena	85	Outwash plains, Stream terraces	No	---
	Estherville	5	Outwash plains, Stream terraces	No	---
	Kanaranzi	5	Outwash plains, Stream terraces	No	---
	Cylinder	3	Outwash plains, Stream terraces	No	---
	Dickinson	2	Outwash plains, Stream terraces	No	---
L139B:					
Wadena loam, 2 to 6 percent slopes	Wadena	85	Hills, Hills, Outwash plains, Terraces	No	---
	Estherville	7	Hills, Hills, Outwash plains, Terraces	No	---
	Cylinder	3	Outwash plains, Stream terraces	No	---
	Dickinson	3	Hills, Hills, Outwash plains, Stream terraces	No	---
	Biscay	2	Flats, Outwash plains, Swales	Yes	2B3
L140A:					
Ocheda silty clay loam, 1 to 3 percent slopes	Ocheda	85	Lake plains, Moraines	No	---
	Guckeen	5	Lake plains, Moraines	No	---
	Collinwood	3	Lake plains, Moraines	No	---
	Nicollet	3	Flats, Moraines, Rises	No	---
	Clarion	2	Hills, Moraines	No	---
	Marna	2	Lake plains, Moraines	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L141A:					
Spillville loam, 0 to 2 percent slopes, occasionally flooded	Spillville, occasionally flooded	86	Flood plains	No	---
	Coland, occasionally flooded	8	Flood plains	Yes	2B3
	Hanlon, occasionally flooded	4	Flood plains	No	---
	Havelock, occasionally flooded	2	Flood plains	Yes	2B3
L144A:					
Chetomba silty clay loam, 0 to 2 percent slopes	Chetomba	75	Moraines	Yes	2B3
	Waldorf	13	Moraines	Yes	2B3
	Webster	5	Moraines	Yes	2B3
	Okoboji, depressional	3	Moraines	Yes	2B3, 3
	Prinsburg	3	Moraines	Yes	2B3
	Okabena	1	Moraines	No	---
L145A:					
Canisteo silty clay loam, 0 to 2 percent slopes	Canisteo	80	Depressions, Flats, Moraines, Rims	Yes	2B3
	Glencoe, depressional	10	Moraines	Yes	2B3, 3
	Webster	5	Moraines	Yes	2B3
	Prinsburg	4	Depressions, Flats, Lake plains, Moraines, Rims	Yes	2B3
	Crippin	1	Moraines	No	---
L146A:					
Glencoe silty clay loam, depressional, 0 to 1 percent slopes	Glencoe, depressional	80	Moraines	Yes	2B3, 3
	Canisteo	10	Depressions, Flats, Moraines, Rims	Yes	2B3
	Harps	10	Moraines	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L150A:					
Prinsburg silty clay loam, 0 to 2 percent slopes	Prinsburg	75	Lake plains, Moraines	Yes	2B3
	Chetomba	14	Lake plains, Moraines	Yes	2B3
	Webster	4	Lake plains, Moraines	Yes	2B3
	Canisteo	3	Lake plains, Moraines	Yes	2B3
	Okabena	2	Lake plains, Moraines	No	---
	Okoboji, depressional	2	Lake plains, Moraines	Yes	2B3, 3
L151A:					
Glencoe mucky silty clay loam, ponded, 0 to 1 percent slopes	Glencoe, ponded	80	Moraines	Yes	2B3, 3
	Okoboji, ponded	14	Moraines	Yes	2B3, 3
	Klossner, ponded	6	Moraines	Yes	1, 3
L152B:					
Lowlein-Round lake complex, 1 to 6 percent slopes	Lowlein	60	Moraines	No	---
	Round Lake	20	Moraines	No	---
	Nicollet	12	Moraines	No	---
	Farrar	6	Moraines	No	---
	Webster	2	Moraines	Yes	2B3
L153A:					
Essexville sandy loam, 0 to 2 percent slopes	Essexville	85	Moraines	Yes	2B3
	Canisteo	5	Moraines	Yes	2B3
	Glencoe, depressional	4	Moraines	Yes	2B3, 3
	Belleville	3	Moraines	Yes	2B3
	Very poorly drained soils in depressions	2	Moraines	Yes	2B3, 3
	Somewhat poorly drained soils	1	Moraines	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L154E:					
Belview-Ridgeton complex, 15 to 45 percent slopes	Belview	60	Moraines	No	---
	Ridgeton	22	Moraines	No	---
	Omsrud	14	Moraines	No	---
	Delft	2	Moraines	Yes	2B3
	Terril	2	Moraines	No	---
L155A:					
Okoboji mucky silty clay loam, ponded, 0 to 1 percent slopes	Okoboji, ponded	85	Moraines	Yes	2B3, 3
	Glencoe, ponded	10	Moraines	Yes	2B3, 3
	Blue Earth, ponded	3	Moraines	Yes	2B3, 3
	Klossner, ponded	2	Moraines	Yes	1, 3
L156C2:					
Omsrud-Storden-Pilot Grove complex, 6 to 12 percent slopes, moderately eroded	Omsrud, moderately eroded	44	Moraines	No	---
	Storden, moderately eroded	24	Moraines	No	---
	Pilot Grove	20	Moraines	No	---
	Hawick	8	Moraines	No	---
	Delft	2	Moraines	Yes	2B3
	Terril	2	Moraines	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L156D2:					
Omsrud-Storden-Pilot Grove complex, 12 to 18 percent slopes, moderately eroded	Omsrud, moderately eroded	50	Moraines	No	---
	Storden, moderately eroded	25	Moraines	No	---
	Pilot Grove	15	Moraines	No	---
	Hawick	4	Moraines	No	---
	Delft	2	Moraines	Yes	2B3
	Ridgeton	2	Moraines	No	---
	Terril	2	Moraines	No	---
L157A:					
Lowlein loam, 0 to 2 percent slopes	Lowlein	78	Moraines	No	---
	Nicollet	14	Moraines	No	---
	Round lake	4	Hills, Moraines	No	---
	Farrar	2	Hills, Moraines	No	---
	Webster	2	Moraines	Yes	2B3
L158B:					
Round lake sandy loam, 1 to 6 percent slopes	Round Lake	80	Moraines	No	---
	Lowlein	13	Moraines	No	---
	Ocheyedan	3	Moraines	No	---
	Estherville	2	Moraines	No	---
	Webster	2	Moraines	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L159A:					
Knoke mucky silty clay loam, depressional, 0 to 1 percent slopes	Knoke, depressional	85	Moraines	Yes	2B3, 3
	Okoboji, depressional	5	Moraines	Yes	2B3, 3
	Essexville	4	Moraines	Yes	2B3
	Canisteo, depressional	3	Moraines	Yes	2B3, 3
	Canisteo	3	Moraines	Yes	2B3
L160B:					
Dickinson sandy loam, loamy substratum, 1 to 6 percent slopes	Dickinson, loamy substratum	85	Moraines	No	---
	Farrar	8	Moraines	No	---
	Lowlein	7	Moraines	No	---
L161C:					
Estherville-Pilot Grove complex, 6 to 12 percent slopes	Estherville	38	Moraines	No	---
	Pilot Grove	38	Moraines	No	---
	Well drained soils	14	Moraines	No	---
	Hawick	6	Moraines	No	---
	Delft	2	Moraines	Yes	2B3
	Terril	2	Moraines	No	---
L162B:					
Clarion-Round lake complex, 2 to 6 percent slopes	Clarion	45	Moraines	No	---
	Round Lake	30	Moraines	No	---
	Estherville	8	Moraines	No	---
	Lowlein	5	Moraines	No	---
	Nicollet	5	Moraines	No	---
	Swanlake	5	Moraines	No	---
	Webster	2	Moraines	Yes	2B3

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
L163A:					
Okoboji silty clay loam, depressional, 0 to 1 percent slopes	Okoboji, depressional	92	Moraines	Yes	2B3, 3
	Canisteo	2	Moraines	Yes	2B3
	Harpster	2	Moraines	Yes	2B3
	Knoke, depressional	2	Moraines	Yes	2B3, 3
	Prinsburg	2	Moraines	Yes	2B3
L170B:					
Estherville-Round lake complex, 2 to 6 percent slopes	Estherville	50	Moraines	No	---
	Round Lake	45	Moraines	No	---
	Lowlein	3	Moraines	No	---
	Poorly drained soils	2	Moraines	Yes	2B3
M-W:					
Water, miscellaneous	Water, miscellaneous	100	---		---
P1B:					
Annieville silty clay loam, 2 to 5 percent slopes	Annieville	80	Till plains	No	---
	McCreath	10	Till plains	No	---
	Galva	5	Till plains	No	---
	Primghar	5	Till plains	No	---
P2A:					
McCreath silty clay loam, 1 to 3 percent slopes	McCreath	80	Till plains	No	---
	Gillett Grove	10	Till plains	Yes	2B3
	Annieville	5	Till plains	No	---
	Primghar	5	Till plains	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
P3A:					
Biscay silty clay loam, 0 to 2 percent slopes, occasionally flooded	Biscay, occasionally flooded	85	Outwash plains	Yes	2B3
	Cylinder, occasionally flooded	10	Outwash plains	No	---
	Talcot, occasionally flooded	5	Outwash plains	Yes	2B3
P7A:					
Comfrey clay loam, 0 to 2 percent slopes, occasionally flooded	Comfrey, occasionally flooded	80	Flood plains	Yes	2B3
	Colo, occasionally flooded	5	Flood plains	Yes	2B3
	Havelock, occasionally flooded	5	Flood plains	Yes	2B3
	Havelock, frequently flooded	5	Flood plains	Yes	2B3, 4
	Spillco, occasionally flooded	5	Flood plains	No	---
P9A:					
Gillett Grove silty clay loam, 0 to 2 percent slopes	Gillett Grove	85	Till plains	Yes	2B3
	McCreath	10	Till plains	No	---
	Afton, frequently flooded	5	Till plains	Yes	2B3
P12B:					
Everly silty clay loam, 2 to 6 percent slopes	Everly	80	Till plains	No	---
	Sac	10	Till plains	No	---
	Ransom	5	Till plains	No	---
	Wilmonton	5	Till plains	No	---
P12C2:					
Everly silty clay loam, 6 to 12 percent slopes, moderately eroded	Everly, moderately eroded	80	Till plains	No	---
	Everly	10	Till plains	No	---
	Moneta	5	Till plains	No	---
	Wilmonton	5	Till plains	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
P15B:					
Galva silty clay loam, 2 to 5 percent slopes	Galva	80	Till plains	No	---
	Primghar	10	Till plains	No	---
	Annieville	5	Till plains	No	---
	Sac	5	Till plains	No	---
P20B:					
Judson silt loam, 3 to 8 percent slopes	Judson	80	Till plains	No	---
	Primghar	10	Till plains	No	---
	Galva	5	Till plains	No	---
	Whitewood, overwash	5	Till plains	No	---
P21A:					
Marcus silty clay loam, 0 to 2 percent slopes	Marcus	80	Till plains	Yes	2B3
	Whitewood, frequently flooded	10	Till plains	Yes	2B3
	Primghar	5	Till plains	No	---
	Spicer	5	Till plains	Yes	2B3
P27A:					
Primghar silty clay loam, 1 to 3 percent slopes	Primghar	80	Till plains	No	---
	Galva	8	Till plains	No	---
	Marcus	8	Till plains	Yes	2B3
	Judson	4	Till plains	No	---
P28A:					
Ransom silty clay loam, 1 to 3 percent slopes	Ransom	80	Till plains	No	---
	Rushmore	8	Till plains	Yes	2B3
	Sac	8	Till plains	No	---
	Primghar	4	Till plains	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
P29A:					
Rushmore silty clay loam, 0 to 2 percent slopes	Rushmore	80	Till plains	Yes	2B3
	Ransom	10	Till plains	No	---
	Whitewood, frequently flooded	10	Till plains	Yes	2B3
P30B:					
Sac silty clay loam, 2 to 5 percent slopes	Sac	80	Till plains	No	---
	Annieville	10	Till plains	No	---
	Primghar	5	Till plains	No	---
	Ransom	5	Till plains	No	---
P31A:					
Spicer silty clay loam, 0 to 2 percent slopes	Spicer	85	Till plains	Yes	2B3
	Marcus	10	Till plains	Yes	2B3
	Whitewood	5	Till plains	Yes	2B3
P33A:					
Spillco silt loam, 0 to 2 percent slopes, occasionally flooded	Spillco, occasionally flooded	85	Flood plains	No	---
	Spillco, frequently flooded	10	Flood plains	Yes	4
	Comfrey, occasionally flooded	5	Flood plains	Yes	2B3
P36A:					
Talcot silty clay loam, 0 to 2 percent slopes, occasionally flooded	Talcot, occasionally flooded	85	Outwash plains	Yes	2B3
	Biscay, occasionally flooded	10	Outwash plains	Yes	2B3
	Cylinder, occasionally flooded	5	Outwash plains	No	---
P37D:					
Talmo gravelly sandy loam, 6 to 35 percent slopes	Talmo	90	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Thurman	5	Outwash plains	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
P38B:					
Thurman sandy loam, 2 to 6 percent slopes	Thurman	90	Outwash plains	No	---
	Henkin	10	Outwash plains	No	---
P38C:					
Thurman sandy loam, 6 to 12 percent slopes	Thurman	90	Outwash plains	No	---
	Henkin	10	Outwash plains	No	---
P43A:					
Wilmonton silty clay loam, 1 to 3 percent slopes	Wilmonton	85	Till plains	No	---
	Everly	5	Till plains	No	---
	Ransom	5	Till plains	No	---
	Rushmore	5	Till plains	Yes	2B3
P45E:					
Moneta clay loam, 15 to 45 percent slopes	Moneta	85	Till plains	No	---
	Judson	10	Till plains	No	---
	Soils that are moderately deep to carbonates	5	Till plains	No	---
P48A:					
Allendorf silty clay loam, 0 to 2 percent slopes	Allendorf	85	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Sac	5	Outwash plains	No	---
	Soils that are moderately well drained	5	Outwash plains	No	---
P48B:					
Allendorf silty clay loam, 2 to 6 percent slopes	Allendorf	85	Outwash plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Sac	5	Outwash plains	No	---
	Soils that are moderately well drained	5	Outwash plains	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
P49A:					
Comfrey clay loam, 0 to 2 percent slopes, frequently flooded	Comfrey, frequently flooded	85	Flood plains	Yes	2B3, 4
	Comfrey, occasionally flooded	5	Flood plains	Yes	2B3
	Havelock, frequently flooded	5	Flood plains	Yes	2B3, 4
	Spillco, occasionally flooded	5	Flood plains	No	---
P50B:					
Everly-Kanaranzi complex, 2 to 6 percent slopes	Everly	60	Till plains	No	---
	Kanaranzi	25	Outwash plains	No	---
	Wilmonton	10	Till plains	No	---
	Ransom	5	Till plains	No	---
P51C2:					
Everly-Moneta-Talmo complex, 6 to 12 percent slopes, moderately eroded	Everly, moderately eroded	40	Till plains	No	---
	Moneta, moderately eroded	20	Till plains	No	---
	Talmo, moderately eroded	20	Outwash plains	No	---
	Everly	10	Till plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Wilmonton	5	Till plains	No	---
P52D2:					
Moneta-Everly-Talmo complex, 12 to 18 percent slopes, moderately eroded	Moneta, moderately eroded	40	Till plains	No	---
	Everly, moderately eroded	20	Till plains	No	---
	Talmo, moderately eroded	20	Outwash plains	No	---
	Everly	10	Till plains	No	---
	Kanaranzi	5	Outwash plains	No	---
	Wilmonton	5	Till plains	No	---

Hydric Soils

Nobles County, Minnesota

Map symbol and map unit name	Component	Percent of map unit	Landform	Hydric rating	Hydric criteria
P53C2:					
Everly-Moneta complex, 6 to 12 percent slopes, moderately eroded	Everly, moderately eroded	55	Till plains	No	---
	Moneta, moderately eroded	25	Till plains	No	---
	Everly	10	Till plains	No	---
	Wilmonton	10	Till plains	No	---
P54D2:					
Moneta-Everly complex, 12 to 18 percent slopes, moderately eroded	Moneta, moderately eroded	45	Till plains	No	---
	Everly, moderately eroded	40	Till plains	No	---
	Everly	10	Till plains	No	---
	Wilmonton	5	Till plains	No	---
P55A:					
Kato silty clay loam, 0 to 2 percent slopes	Kato	90	Outwash plains	Yes	2B3
	Somewhat poorly drained soils	10	Outwash plains	No	---
P56A:					
Kanaranzi silt loam, 0 to 2 percent slopes	Kanaranzi	80	Outwash plains	No	---
	Allendorf	10	Outwash plains	No	---
	Moderately well drained soils	10	Outwash plains	No	---
P56B:					
Kanaranzi silt loam, 2 to 6 percent slopes	Kanaranzi	80	Outwash plains	No	---
	Allendorf	14	Outwash plains	No	---
	Talmo	6	Outwash plains	No	---
W:					
Water	Water	100	---		---

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2003) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2B3). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
   A. are somewhat poorly drained and have a water table at the surface (0.0 feet) during the growing season, or
   B. are poorly drained or very poorly drained and have either:
      1) a water table at the surface (0.0 feet) during the growing season if textures are coarse sand, sand, or fine sand in all layers within a depth of 20 inches, or
      2) a water table at a depth of 0.5 foot or less during the growing season if permeability is equal to or greater than 6.0 in/hr in all layers within a depth of 20 inches, or
      3) a water table at a depth of 1.0 foot or less during the growing season if permeability is less than 6.0 in/hr in any layer within a depth of 20 inches.
3. Soils that are frequently ponded for long or very long duration during the growing season.
4. Soils that are frequently flooded for long or very long duration during the growing season.

References:

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
Federal Register. September 18, 2002. Hydric soils of the United States.
Federal Register. July 13, 1994. Changes in hydric soils of the United States.
Hurt, G.W., P.M. Whited, and R.F. Pringle, editors. Version 5.0, 2002. Field indicators of hydric soils in the United States.
National Research Council. 1995. Wetlands: Characteristics and boundaries.
Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.
Soil Survey Staff. 2003. Keys to soil taxonomy. 9th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.
Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.